COMMENTS OF

MASS MERCHANDISERS, INC.

REGARDING UPDATE NO. 4 TO THE

NATIONAL PRIORITIES LIST

ARKWOOD, INC. SITE (OMAHA, ARKANSAS)

I. INTRODUCTION

These comments are submitted on behalf of Mass Merchandisers, Inc. of Harrison, Arkansas ("MMI") in response to EPA's Update No. 4 to the National Priorities List. 50 Fed. Reg. 37950 (published September 18, 1985). MMI's comments are limited to the Hazardous Ranking System ("HRS") score proposed for the Arkwood, Inc. site in Omaha, Arkansas. As set forth more fully below, MMI believes that EPA's HRS calculations contain two errors that significantly affect the ultimate HRS score for the Arkwood site. First, EPA's estimate of the total quantity of waste erroneously counts the same waste more than once. Second, EPA's Groundwater Targets calculations are based on an erroneous assumption regarding the number of affected groundwater users and the availability of alternate, unthreatened supplies. When both of these errors are eliminated from the HRS calculations, the HRS score for the Arkwood site is reduced from 34.21 to 14.52.

II. BACKGROUND

The Arkwood site is the location of a small, single cylinder wood treating plant in north central Arkansas. The plant was constructed in 1962 and closed in 1984. MMI operated the plant from 1974 to 1984. In 1981, an off-site investigation revealed detectable levels of pen-

tachlorophenol in two springs and two inactive domestic wells in the immediate vicinity of the plant site. Since 1981, MMI has cooperated with the Arkansas Department of Pollution Control & Ecology ("ADPC&E") in voluntary efforts to investigate groundwater conditions and remove potential sources of contamination.

III. THE PROPOSED HRS WASTE QUANTITY CALCULATION

Update No. 4 to the NPL proposed an HRS score of 34.21 for the Arkwood site. This calculation was based, in part, on an estimated total quantity of waste of 6,234 tons. This estimated quantity of waste, in turn, is the total of three separate items:

1. Bob Barker, one of the Arkwood plant managers, estimated to ADPC&E inspectors in 1981 that the plant produced a total of 500 gallons of waste per year during his tenure. The HRS calculation in Update No. 4 multiplied this 500 gallon per year figure by the 22 years the plant was in operation, for a total of 11,000 gallons, or 220 fifty gallon drums, for a scoring equivalent of 55 tons.

2. A pit or ditch adjacent to the plant site, which contains sludge and soil contaminated with creosote and pentachlorophenol, was estimated to be 40 feet long, 15 feet wide, and 3 feet deep. These dimensions result in a total volume of 68 cubic yards, or a scoring equivalent of 68 tons.

3. A sawdust pile at the east end of the plant yard was estimated to be 275 feet long, 150 feet wide, and 4 feet deep. These dimensions result in a volume of 6,111 cubic yards, or a scoring equivalent of 6,111 tons.

MMI respectfully submits that these waste quantity calculations erroneously count the same wastes more than

once and, consequently, overstate the value used in the HRS scoring for total quantity of waste.

The first item in EPA's calculations represents an estimate of waste generated over the operating life of the plant. The second item, the railroad ditch, is one of the areas where these wastes were placed. Thus, all of the wastes placed in the railroad ditch are counted once as part of Item No. 1, and a second time as part of Item No. 2. MMI concedes that the total volume of the contaminated soil in the railroad ditch is undoubtedly larger than the volume of waste which is contaminating the soil. Under the Hazard Ranking System, however, it is inappropriate to base a score on the total volume of contaminated soil or other contaminated matrix at a site. Only the amount of the contaminating hazardous substance is to be included in the waste quantity calculation. Uncontrolled Hazardous Waste Site Ranking System Users Manual. 47 Fed. Reg. 31187, at 31229 (published July 16, 1982).

Item No. 3 in the calculation of total waste represents an even more significant error in the estimate of waste quantity. The pile of sawdust and shavings at the east end of the plant yard was generated by wood planing equipment used in the manufacture of ties and posts. The planing equipment was used exclusively on untreated wood. Consequently, the sawdust and shavings themselves originally

contained no treatment chemicals. Sampling evidence indicates, however, that the sawdust pile is now contaminated with pentachlorophenol in the low parts per million range.* The only possible source of the pentachlorophenol observed in the sawdust pile is MMI's use of the liquid wastes included in Item No. 1, above, for dust control purposes. Consequently, as with the railroad ditch, all of the wastes in the sawdust pile are counted once by EPA as a part of Item No. 1, and once again as part of the sawdust pile. Furthermore, inclusion of the entire volume of the sawdust pile improperly adds to the waste calculations a substantial volume of soil and sawdust on top of the quantity of the wastes which have contaminated them.

If, for any reason, the sawdust pile is included in the calculation of hazardous waste, MMI also wishes to note that the dimensions attributed to the sawdust pile by EPA overstate its volume by more than two orders of magnitude. In order to establish more accurate dimensions, MMI photographed and surveyed the sawdust pile as it now exists. The photograph of the sawdust pile is reproduced as Appendix A of these Comments. A drawing with surface and depth measurements is reproduced as Appendix B. MMI's measurements indicate that the sawdust pile has a surface area of

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*The Documentation Record for EPA's HRS scoring indicates that the sawdust pile was included in the calculation of waste quantity because two 1979 soil and sawdust samples taken by the ADPC&E showed pentachlorophenol contamination

2108 square feet and an average depth of six to nine inches. These dimensions result in a total volume of less than 60 cubic yards.

EPA's estimate of 6,111 cubic yards for the volume of the sawdust pile was based upon an April 1985 memorandum from Doice Hughes, a geologist with ADPC&E, to Tim Perdue in the Region VI Office. MMI discussed its photograph and survey with Mr. Hughes as part of its preparation of these Comments. Mr. Hughes indicated that the dimensions he originally reported to EPA were only an estimate, and that a subsequent visit to the site convinced him that his estimate significantly overstated the size of the sawdust pile. Mr. Hughes indicated that he did not question the accuracy of MMI's measurements.

In discussing the sawdust pile, MMI wishes to stress that there has been no alteration of the sawdust pile or removal of materials since the ranking process was initiated. The plant site is fenced in, with a locked gate.

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at levels of 30,000 and 23,000 parts per million. MMI questions the levels of pentachlorophenol reported for these samples and recently took three samples from three different portions of the sawdust pile for independent verification. The samples taken by MMI were analyzed by the McKesson Environmental Services Laboratory in Dublin, California. The analytical results showed pentachlorophenol at 0.5 ppm, 2.1 ppm, and 170 ppm. Splits of each sample were retained and will be made available to EPA if it wishes independent confirmation of the analyses.

To the best of MMI's knowledge, no sawdust or shavings have been added to or removed from the sawdust pile since the termination of treatment operations in 1984.

Based upon the foregoing facts, MMI believes that Item No. 2, the railroad ditch, and Item No. 3, the sawdust that is assigned an HRS scoring value of 2. 47 Fed. Reg. 31187, at 31229 (published July 16, 1982). When this new scoring value is substituted for the original waste quantity value, the final HRS score for the Arkwood site is reduced from 34.21 to a corrected score of 26.32. An itemized comparison of the original HRS calculation and the revised calculation for the Arkwood site is attached as Appendix C of these Comments.

IV. AFFECTED GROUNDWATER USE

EPA's HRS scoring sheets and Documentation Record assigned a Groundwater Targets value of 29 for the Arkwood site. This Groundwater Targets value was based, in part, on the assumption that there are "no significant aquatards" separating the shallow groundwater system in the immediate vicinity of the plant, which has shown trace contamination off-site, and the deep aquifer that supplies the Omaha municipal water system and other groundwater users within a three mile radius of the plant. MMI believes that EPA's assumption is mistaken and that there is a substantial

barrier between the shallow groundwater system affected by the plant site, and the deep aquifer supplying the Omaha municipal water system and other groundwater users in the area.

As part of its voluntary effort to deal with conditions at the site, MMI has retained Geraghty & Miller to conduct a geohydrologic investigation of the Arkwood site and the surrounding area. Although substantial additional work remains to be done by Geraghty & Miller, their initial site assessment and monitoring data indicate that the contaminants have been found to reside only in the shallow (less than fifty feet below land surface) interconnected solution cavities found at the base of the limestone formation. Water that enters the shallow drainage system flows laterally westward through the shallow solution features, emerging as springs along Cricket Creek about 400 yards from the Arkwood plant site. Most of the domestic wells within about a mile of the plant have been tested; only three wells located in a very small area between the plant and the spring contain the contaminants. It is believed that the contaminants enter the wells via the shallow solution channels because the wells are cased only into the top of the limestone (and not to the depth of the solution channels), and a 300-foot thick confining bed exists below the shallow water-bearing zone.

It is Geraghty & Miller's belief that the 2100-foot Omaha municipal water well is not in any way threatened by waste from the Arkwood site. Several hydrogeologic reasons support this conclusion:

1. The hydraulic gradient at Arkwood has been determined to be northwestward (the Omaha well is located to the northeast);

2. The distance between the Arkwood site and the Omaha well is about one mile;

3. Several domestic water wells are located between the Arkwood site and the Omaha well that have not been found to be contaminated and, if designated as such, can act as an early warning system;

4. Several thick aquicludes exist between the shallow zone in which contamination has been observed and the aquifer that is tapped by the Omaha well;

5. A properly cased 900-foot well that is located on the Arkwood plant site itself has been sampled repeatedly and is free of any contamination.

Based upon the data generated thus far by Geraghty & Miller, MMI believes that two corrections should be made in the Groundwater Targets valde for the Arkwood site. First, the Groundwater Use factor should be reduced from 3 to 2, because users of domestic wells in the vicinity of the plant have a municipal water supply available nearby which draws from an alternate, unthreatened source. Second, the population served by domestic wells in the immediate vicinity of the plant which could be affected by contamination in the shallow groundwater system totals less than ten

houses or a scoring equivalent of 38 people. This population falls in the 1 to 100 population range that is assigned a scoring value of 1. Use of this revised population value, together with the revised Groundwater Use factor, lowers the Groundwater Targets score from 29 to 16. The revision of the Groundwater Targets value, in turn, lowers the overall HRS score for the Arkwood site from 34.21 originally proposed by EPA to a corrected score of 18.87.

When the corrections suggested by these comments for total quantity of waste and Groundwater Targets are both included in the calculation, the final HRS score for the Arkwood site is reduced from 34.21 to a corrected score of 14.52. An itemized comparison of the original and revised HRS calculations is attached in Appendix C of these Comments.

VI. STATUS OF RESPONSE ACTIVITY

MMI recognizes that it is EPA policy not to consider the status of previous response or clean-up actions when scoring a potential NPL site. See 47 Fed. Reg. 31187 (July 16, 1982); 48 Fed. Reg. 40664 (September 8, 1983). Nevertheless, MMI believes that the current status of site investigation and remedial activity is relevant in considering the relative priority or need for Superfund attention at a given site.

The Arkwood site is not an orphaned or abandoned site. The owner and prior operators of the Arkwood site are known, and their financial resources are unquestionably adequate to address any foreseeable remedial contingency. More importantly, one of the responsible parties, MMI, has been cooperating with state officials for several years in remedial investigation and response activity. Finally, as noted by EPA in the Arkwood summary, a consent order addressing the site is nearing completion and should soon be entered.

Against this background, there is little reason to doubt that prompt and thorough investigation and remediation will take place at the Arkwood site without Superfund involvement.

VI. CONCLUSION

For the reasons set forth above, MMI respectfully submits that the HRS score proposed for the Arkwood site was based on an overestimate of the total quantity of waste and an erroneous assumption regarding the use of affected groundwater. As reflected in Appendix C, correction of either error significantly reduces the overall HRS score for the Arkwood site. When both errors are corrected, the revised HRS calculations reduce the overall score for the Arkwood site from 34.21 to a corrected score of 14.52.

MMI remains ready and willing to cooperate with EPA in any way it can in further consideration of the HRS scoring of the Arkwood site.

Respectfully submitted,

MITCHELL, WILLIAMS, SELIG,
JACKSON & TUCKER

By Allan Gates
Allan Gates

Attorneys for
Mass Merchandisers, Inc.

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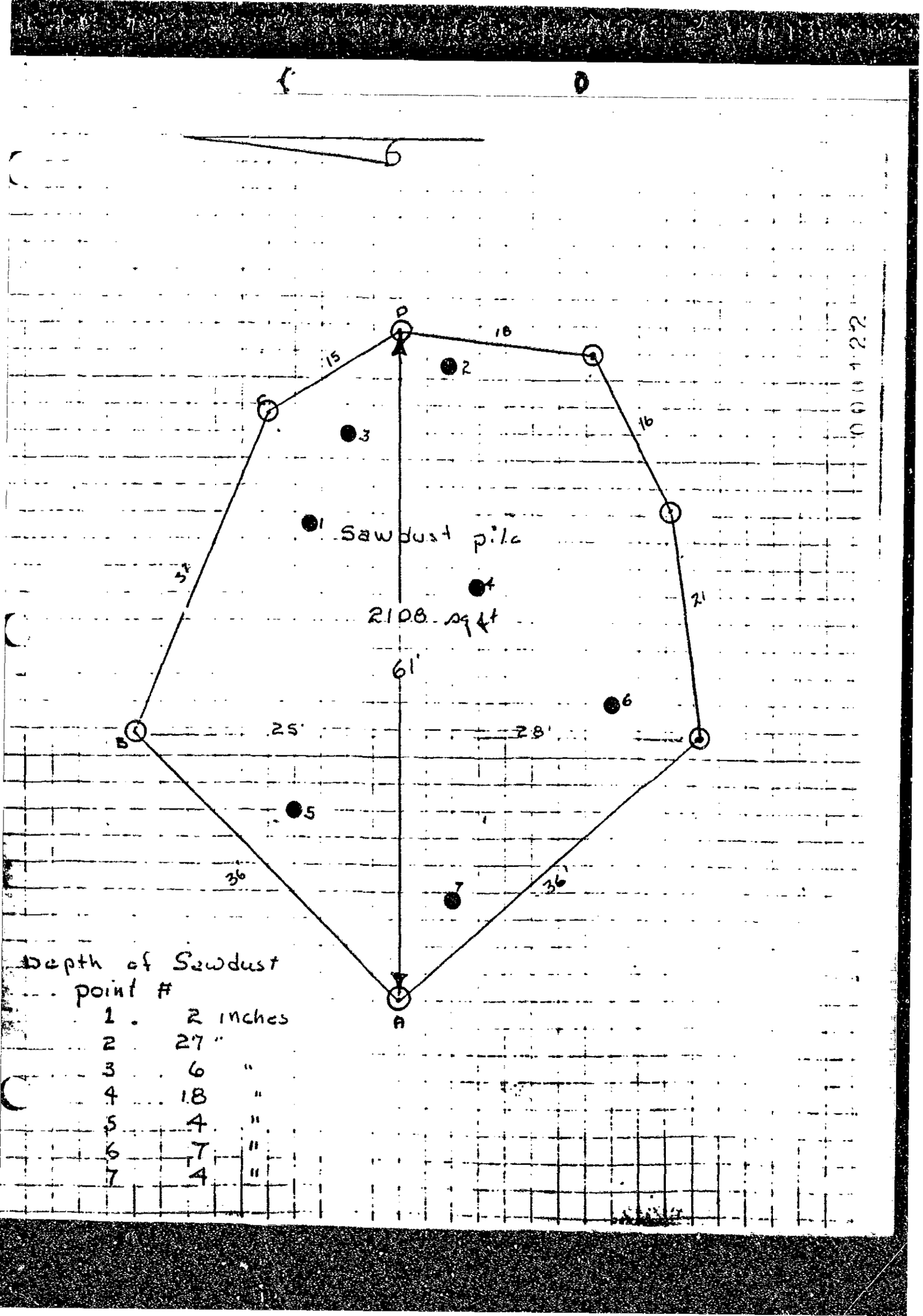
APPENDIX A

PHOTOGRAPH OF "SAWDUST PILE"

(EAST END ARKWOOD PLANT YARD)

APPENDIX B

DRAWING OF SAWDUST PILE DIMENSIONS



Depth of Sawdust

point #	
1	2 inches
2	27 "
3	6 "
4	18 "
5	4 "
6	7 "
7	4 "

APPENDIX C

ORIGINAL AND REVISED HRS CALCULATIONS

HRS CALCULATIONS

	Original EPA Proposed	Water Quality Revised	Groundwater Targets Revised	Both Revisions
Line 1 - Observed Release	45	45	45	45
Line 4 - Waste Characteristics				
Toxicity/Persistence	18	18	18	18
Hazardous Waste Quantity	8	2	8	2
	26	20	26	20
Line 5 - Targets				
Groundwater Use (Multiplied by 3)	9	9	6	6
Distance to Nearest Well/Population Served	20	20	10	10
	29	29	16	16
Lines 1 x 4 x 5	33,930	26,100	18,720	14,400
Divided by 57,330	0.5918367	0.455259	0.3265306	0.2511773
Multiplied by 100	59.18367	45.5259	32.65306	25.11773
Divided by 1.73	34.2	26.32	18.87	14.52